Wayground as a Learning Tool to Enhance Student Retention in Araling Panlipunan

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DOI: https://doi.org/10.47772/IJRISS.2026.100500732

Received: 16 May 2026; Accepted: 22 May 2026; Published: 11 June 2026

ABSTRACT

This study aimed to evaluate the efficacy of Wayground as a tool for enhancing student retention in Araling Panlipunan 10. This was conducted to address retention failure, as reflected in both local and foreign tests administered to the students. The researcher used the quasi-experimental research design with pretest-posttest non-equivalent control group. The study was conducted at Maribago High School during the 2025-2026 school year. The researcher used a purposive sampling technique to select the sample. A total of 72 respondents were selected, with the Experimental Group comprising 34 respondents exposed to Wayground and the Control Group comprising 38 respondents exposed to conventional instruction methods. Data were gathered using a 50-item pretest and posttest to measure knowledge retention, as well as survey questions to assess the platform's acceptability. To analyze the collected data, a t-test was employed to determine whether there is a significant difference in posttest scores and to validate the null hypothesis. There was a statistically significant difference in posttest scores, leading to rejection of the null hypothesis. In addition, Wayground received an impressive acceptability score. Based on the results, Wayground is more effective at reducing the knowledge retention gap in Araling Panlipunan. Based on the results, Wayground may shift from passive to interactive learning activities. An action plan was formulated based on the results.

Keywords: Araling Panlipunan, Wayground, Knowledge Retention, Quasi- Experimental, Lapu-Lapu City, Philippines

INTRODUCTION

The rapid change of technology has had a profound effect on the global education sector in the context of the adoption of technology in the teaching process. Across the globe, the educational sector is witnessing a paradigm shift from conventional learning processes towards a technologically driven environment in order to meet the requirements of the students of the 21st century. This is primarily because of the compelling need to improve the declining trends in the performance of students on a global scale. The international education sector has adopted the use of technology in order to provide a more engaging and interactive learning process.

Despite these global initiatives to enhance teaching practices, the Philippines still experiences considerable problems in the performance of the students. One such problem is the quality of education in the Philippines, which is a point of concern at the national level, as measured at the international level. According to the 2022 Programme for International Student Assessment (PISA) results, the Philippines is still in the lower 10% of the 81 participating countries, which is a critical gap in the level of learning OECD. (2023). *PISA 2022.* This is further reflected in the National Achievement Test (NAT) results, where it is evident that Filipino students fail to achieve the required level in the core subject areas.

Araling Panlipunan or AP is one of the specific subjects where this underperformance is most apparent. It is generally seen by students as a challenging field, marked by a high volume of materials, intricate historical stories, and rote memorization of dates and concepts of socialization, which has often culminated in a lack of interest and enthusiasm. Traditional and passive modes of teaching and learning have failed to produce results in terms of information retention and the development of a high civic consciousness. As a result, a growing

disconnect has emerged between the curriculum and the students' capacity to retain and contextualize this information.

In order to address the local problems of retention and engagement, various digital innovations have been introduced in the classrooms of the Philippines as an intervention. Among the various technologies introduced is the use of Wayground, a web-based application, that has been identified as a strategy used by teachers to promote interactive learning through a gamification of the learning process.

However, despite of the rising incidence of Wayground and other online applications, there exists a glaring lack of assessment as to the specific efficacy of the online application in the subject matter of Araling Panlipunan. The online application is obviously utilized in the classroom, but there are no empirical study to validate the efficacy of the online application in enhancing the retention and understanding of the subject matter. In order to validate the efficacy of the online applications, it is imperative to conduct a study on the effectiveness of the online application.

This study aims to specifically assess the effectiveness of Wayground in improving retention of important learning concepts among the Grade 10 students of Araling Panlipunan at Maribago High School. The main purpose of this study is to determine if the integration of web-based applications such as Wayground can indeed bridge the content provision and knowlwdge recall gaps in Araling Panlipunan. The main output of this study is a Proposed Action Plan, which will provide useful insights on the integration of technology. This study will benefit different stakeholders: it will provide teachers with better teaching approaches, school administrators with a basis for decision-making on technology issues, and students with a better approach to mastering their national history and civic consciousness.

Statement of the Problem

This research assessed the effectiveness of Wayground in enhancing the Grade 10 students' retention of the key concepts in Araling Panlipunan at Maribago High School in Lapu-lapu City Division during the school year 2025-2026 as basis for an action plan.

Specifically, it answered the following questions:

1.What is the performance level of the respondents' retention of the key concepts in Araling Panlipunan during the pretest:

1.1 control group, and

1.2 experimental group?

2. What is the performance level of the respondents' retention of the key concepts in Araling Panlipunan during the posttest:

2.1 control group, and

2.2 experimental group?

3. Is there a significant difference between the pretest and posttest scores of the:

3.1 control group, and

3.2 experimental group?

4. Is there a significant mean gain difference on the pre-test and post-test scores between the control and the experimental group?

5. As perceived by the students, what is the level of acceptability of the Wayground learning tool in terms of:

5.1 Perceived Usefulness and Retention Impact;

5.2 Perceived Ease of Use and Technical Acceptability, and

5.3 Engagement, Motivation, and Behavioral Intention?

METHODOLOGY

This section presents the use of a quasi-experimental design was considered appropriate in order to measure and analyze the effect of the Wayground platform on the grades of Grade 10 students enrolled in Araling Panlipunan subject. This design involves the comparison between pretest and post-test data gathered from a control group using traditional learning methods and an experimental group applying the use of digital game-based learning. In this case, the determination of the mean gain difference and overall acceptability of the tool will be made possible.

Design

The research design used in this study is a quasi-experimental research design, specifically the pretest-posttest non-equivalent control group design. For this study, the main variables that the researcher seeks to test are the effectiveness of Wayground as an instructional intervention and its direct effect on student retention of concepts in the subject of Araling Panlipunan. The researcher seeks to test if students who underwent a gamified learning experience through Wayground have a higher level of information recall and performance compared to students who underwent a conventional learning experience. The researcher also seeks to test the level of acceptability of the tool in terms of its usability and its effect on student engagement and motivation.

This design is highly appropriate for the study because it aligns with the practical constraints of a school setting where students are already organized into permanent sections. It allows the researcher to establish a baseline retention level through a pretest before the two-week intervention begins. By comparing the results of the pretest and the posttest between the experimental group (using Wayground) and the control group (traditional method), the researcher can identify significant changes in performance that are specifically attributable to the digital tool.

Environment

The research was conducted at **Maribago High School** a public Junior High School located in Datag, Maribago Lapu-Lapu City.

Maribago High School was established in 1996 District IV of DepEd Lapu-Lapu City in the present. Over the years, the school played a vital role in the barangay by participating in community events such as the annual Guitara Festival, a celebration reflecting Maribago's long standing guitar-making tradition. Students are participating in the said tradition alongside with other local schools in Barangay Maribago.

In 2017 and 2019, the school suffered from an unfortunate event which struck the school, it leads to fires that damaged multiple classrooms. There were twelve classrooms in 2017 and at least nine classrooms in 2019 which were burned. This event prompts temporary suspension of classes for reconstruction. These events challenges Maribago High School admin and teachers. The fire incident which caused the lack of classrooms did not stop the teachers and students to continue the process of learning by having temporary classrooms in the School's Gym reflecting its resilience and commitment to learning.

The school offers Grade 7-10 only. The estimated total population of the school is around 800. Integration of digital platforms for teaching and learning is highly encouraged by the administration of the school and therefore provides an appropriate setting for investigating the use of Wayground as a gamified learning tool. The study will focus on selected Araling Panlipunan (AP) classes to assess how this platform influences student retention and participation. The study was conducted in the two sections, Grade 10-JA and Grade 10-JH which has the population of 38 and 34. The former as the Control group and the later as the Experimental group.

Respondents

The respondents in this study was the Grade 10 students from Maribago High School in Lapu-Lapu City.

Seventy two students was purposively selected based on availability and willingness, The control group (10-JA) is composed of 38 students a heterogeneous class and the experimental group (10-JH) which is composed of 34 students and is a heterogeneous class as well. To give the researcher more comprehensive data to analyze regarding the effectiveness of Wayground in improving retention, both of the group was composed of a balanced mix of students in terms of academic performance. These students will go through pre-test and post-test assessments, and a short survey to obtain quantitative information about their educational experience.

The sample determined through purposive sampling. Purposive sampling is a non-probability method of selecting samples, as it is often used in educational research by choosing participants based on specific needs or characteristics that hold great importance regarding the purposes of the study (Etikan, Musa, & Alkassim, 2016). These students will be selected because they are in direct relation with the learning tool that is to be tested, which is Wayground; thus, they should be able to provide relevant and enlightening information on how it impacts retention.

Table 1: The Respondents

Group	Frequency	Percentage %
Control	38	100
Experimental	34	92
TOTAL	**72**	**96**

Instruments

The research used tools like a standardized Pre-Test and Post-Test assessment and survey questions . These are the main instrument that was used to gather quantitative information from the student respondents. The Pretest/ Posttest questionnaire was designed based on MELs Curriculum Guide in Grade 10 Araling Panlipunan and developed with a Table of Specification consistent on the schools format and is a teacher made test. The survey questionnaire was adapted from the Technology Acceptance Model (TAM) developed by Davis (1989), focusing on Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology.

One of the instruments used was a standardized Pre-Test and Post-Test. designed to assess the students' level of information before the intervention and their level of information recall after using Wayground. The results from this section will provide the necessary quantitative evidence to determine whether Wayground significantly improves students' retention in Araling Panlipunan.

A survey questionnaire based on the Technology Acceptance Model (TAM) by Davis (1989) was also used to evaluate the three aspects: Perceived Usefulness and Retention Impact, Perceived Ease of Use and Technical Acceptability, and Engagement, Motivation, and Behavioral Intention. For the purpose of measuring the extent of acceptance of the Wayground educational tool, a survey was developed containing 15 different indicators divided equally across three important variables. The first variable, "Perceived Usefulness and Retention Effects", had five indicators intended to gauge how useful students perceive the educational tool to be in terms of helping them understand and retain Araling Panlipunan knowledge. In addition, the second variable, "Perceived Ease of Use and Technical Acceptance", consisted of five indicators aimed at analyzing the ease of use of the software as well as its technical acceptability. Lastly, the third variable, "Emotional Responses and Behavioral Intention", involved five indicators that measured factors such as students' interest in and pleasure from using the learning tool as well as their intention to use the platform in the future. This part seeks to elicit the perceptions of the students on how the Wayground platform assisted them in their learning process and how user-friendly it is.

To finalize the instrument, the respondents were required to answer the pretest/posttest assessment, which will is used for evaluation purposes to identify the level of retention. In the survey the respondents were required to

identify the level of agreement with the statements provided using a 5 point Likert Scale. The Likert Scale range from 5 (Strongly Agree) to 1 (Strongly Disagree), enabling the students to identify the level of intensity of their perception regarding the particular aspect of the digital tool. The data obtained was used to calculate the weighted mean.

RESULTS AND DISCUSSIONS

This section presents the data gathered from the pretest, posttest, and acceptability surveys conducted to the Grade 10 students of Maribago High School in Grade 10-JA and Grade 10-JH for the S.Y. 2025-2026. The data will be analyzed and interpreted to assess the efficacy of Wayground as a learning tool to improve retention in Araling Panlipunan.

Performance Level of the Respondents

This portion presents a comprehensive analysis of the academic performance of the Grade 10-JA and Grade 10-JH students of Maribago High School in the academic year 2025-2026. Through the use of the pre-test and posttest results, the researcher analyses the performance levels of the respondents in order to establish their initial understanding and knowledge of the subjects covered in Araling Panlipunan. The results of this analysis will be used as the basis of the effectiveness of Wayground as a teaching aid.

Table 2 Performance level of the respondents' retention of the key concepts in Araling Panlipunan during the pretest

Level	Ranges of Scores	Control		Experimental	
		f	%	f	%
Outstanding	41-50	1	2.63	0	0.00
Very Satisfactory	31-40	6	15.79	4	11.76
Satisfactory	21-30	23	60.53	18	52.94
Fair	11-20	8	21.05	12	35.29
Poor	0-10	0	0.00	0	0.00
Total		**38**	**100.00**	**34**	**100.00**
Average		**25.79**		**23.50**	
St. Dev.		**6.36**		**6.21**	

Table 2 revealed the results of the pretest conducted on both groups that at the beginning of the experiment, both groups had approximately the same level of initial knowledge, mostly falling into the middle range. As can be seen from the data presented above, most of the participants in both groups were able to obtain the Satisfactory mark (60.53% in the control group and 52.94% in the experimental one). In addition, it should be mentioned that in the control group, one student received an Outstanding mark (range 41-50), whereas none of the participants from the experimental group fell under this category. On the contrary, the fair category (range 30-39) had a larger percentage representation among the experimental group members (35.29%) than among the control group members (21.05%). The averages for the two groups demonstrate a slight advantage for the control group: 25.79 as opposed to 23.50 in the case of the experimental one, retention of the subject matter.

This trend of students grouping within the category of "Satisfactory" and "Fair" during a pre-test is something that is consistently observed within the recent education diagnosis. Such phenomenon might be viewed as one that demonstrates "the prior knowledge effect." Following the revised cognitive theory of multimedia learning, Mayer (2021) still argues that students who possess relatively little prior knowledge are bound to experience the largest benefit from a carefully structured technologically-mediated instruction.

Furthermore, the scores of the two participating groups are in concordance with recent meta-analyses regarding visible learning such as those conducted by Hattie (2023) in which pre-testing is considered crucial as far as diagnostics are concerned and it helps determine the zone of proximal development in digital settings. In the Philippines' case, the results are reflective of the issues with social studies instruction that were outlined by the Department of Education (2024) where reliance on memorization is known to produce average, not high mastery

levels of knowledge among students. Finally, the internal validity of the experiment is confirmed by the consistency of the test results within the two groups as per criteria for quasi-experimental studies developed by Creswell & Creswell (2023).

Based on these results, there is ample scope for improvement among both the experimental and control groups because only very few of the students were able to master the important concepts of Araling Panlipunan before the implementation of the intervention. Since the experimental group has a slightly lower mean and a much higher percentage of "Fair" performers, it presents a perfect chance to validate the effectiveness of the educational tool known as Wayground. By analyzing the mean scores after implementing the said learning tool, one will be able to confirm whether the tool helps those who find it difficult to initially understand the lessons. Thus, based on the results, the Proposed Action Plan must be made to cater to the "Satisfactory" majority to reach "Very Satisfactory" and "Outstanding."

Table 3 Performance level of the respondents' retention of the key concepts in Araling Panlipunan during the posttest

Level	Ranges of Scores	Control		Experimental	
		f	%	f	%
Outstanding	41-50	3	7.89	5	14.71
Very Satisfactory	31-40	11	28.95	12	35.29
Satisfactory	21-30	20	52.63	14	41.18
Fair	11-20	4	10.53	3	8.82
Poor	0-10	0	0.00	0	0.00
Total		**38**	**100.00**	**34**	**100.00**
Average		**29.00**		**31.29**	
St. Dev.		**6.93**		**8.30**	

Table 3. Posttest Analysis Results indicate a significant change towards better learning results, with those students who were engaged in the experimental group significantly exceeding the control group in terms of better performance. First of all, there is a clear difference in the number of students who achieved the status of Outstanding in their study, namely, five students in the experimental group against three students in the control group. Second, more people from the experimental group managed to achieve Very Satisfactory results, namely, 35.29% against 28.95%. Although the majority of both groups of learners remains in the Satisfactory category, it should be noted that a great leap forward can be seen in terms of the average mark of the experimental group 31.29 compared to the baseline result of 23.50. It is important to admit that the average result of the control group increased slightly and was 29.00 on average. An increase in standard deviation indicates faster learning speed among various learners in the experimental group.

The notable improvement of the experimental group is consistent with the Theory of Scaffolding by Vygotsky. According to the theory, using proper tools such as Wayground would assist in enabling students to complete tasks that cannot be done without assistance. The increase in outstanding and very satisfactory ratings shows how multimedia technology is consistent with Richard Mayer's (2009) Signaling Principle, which states that multimedia technology helps organize information in ways that ensure that the information is well transferred to the learners. At a local level, these observations show that multimedia technology is consistent with the aims set out in Republic Act 10533 on using ICT to improve students' participation in classroom activities. The findings on the use of multimedia technology in teaching social sciences in Philippines by Bernardo et al. (2018) are consistent with Araling Panlipunan subjects' needs.

The findings above indicate that Wayground can act as a very potent accelerator in terms of memory retention, effectively taking learners out of the "Fair" and "Satisfactory" levels to become better performers. The huge gain in the average score of the experimental group can be attributed to the fact that the learning tool is able to tackle the problems associated with memory retention in the Araling Panlipunan subject. This implies that teachers need to embrace the use of more gamified learning tools if they want to ensure success among their pupils. This means that the implementation of the proposed action plan makes sense.

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume X Issue V May 2026

Significant Difference Between the Pretest and Posttest Scores

Table 4 Test of Significant Difference between the Pretest and Posttest Scores of the Control Group							
Source of Difference	Mean	Standard Deviation	Mean Difference	t- value	p-value	Decision	Result
Pretest	25.79	6.36	3.21	4.389*	0.000	Reject Ho	Significant
Posttest	29.00	6.93					
*significant at $p < 0.05$ (two-tailed); df=37							

Table 4 The statistics obtained after analyzing the performance of the control group show that there is a significant improvement from the pretest phase to the posttest phase without undergoing the experiment. The mean increased from 25.79 to 29.00, showing a mean difference of 3.21. Although there is only an insignificant improvement, the t-test value obtained was 4.389 with a p-value of 0.000, which is less than the 0.05 level of significance. The null hypothesis is thus rejected. It shows that conventional means of instruction yield a certain degree of achievement; however, comparing it to the previous mean difference of the experimental group (7.79), the achievement of the control group is considerably lower. An increase in the standard deviation value from 6.36 to 6.93 indicates that although there is an increase in the overall mean score, the gap between the top and bottom scores of the control group became relatively bigger.

The remarkable enhancement seen in the control group reflects the "maturation effect" along with the effects of conventional classroom teaching. A study in the Philippines by Goodwood Publishing (2023) found that using digital systems for Araling Panlipunan was significantly more effective than traditional lecture techniques. Similarly, Zeng et al. (2025) and Mangulian (2025) report that gamified instruction significantly enhances competency levels and academic performance specifically because it addresses the motivation gaps found in traditional classrooms.

From these results, it can be deduced that although conventional teaching procedures are enough for any kind of academic progress, they are not necessarily the most effective means of tapping into the potential of students in Araling Panlipunan lessons. The disparity in gains made by both groups implies that there is a lot of room left for improvement, room that would not only improve their performance but close an achievement gap that could have been addressed through the use of such tools. School officials who will make decisions regarding this information must therefore take into consideration the idea of using tools such as Wayground to ensure success for all concerned. It may not necessarily involve replacing traditional teachers with technology, but enhancing the former with the latter.

Table 5 Test of Significant Difference between the Pretest and Posttest Scores of the Experimental Group							
Source of Difference	Mean	Standard Deviation	Mean Difference	t- value	p-value	Decision	Result
Pretest	23.50	6.21	7.79	6.154*	0.000	Reject Ho	Significant
Posttest	31.29	8.30					
*significant at $p < 0.05$ (two-tailed); df=33							

Table 5 As can be seen, the performance results of the experimental group show a considerable and significant improvement in performance after the intervention. Specifically, the mean performance level increased from 23.50 in the pretest phase to 31.29 in the posttest phase, which means an impressive mean increase of 7.79. The statistical significance of the change in performance level is proven by the calculated value of the t-test of 6.154, whose probability level (p-value) is much smaller than 0.05. In other words, we can safely reject the null hypothesis and state that the increase in performance was caused by the intervention and was not random. Notably, the standard deviation went up to 8.30 from 6.21, meaning that the tool allowed top performers to achieve high performance at a relatively rapid pace..

The remarkable advantage in statistics further emphasizes the Constructivist Theory of Vygotsky, especially regarding the idea of the Zone of Proximal Development (ZPD). Wayground created an effective learning environment for the participants, allowing them to accomplish greater levels of retention that could not be

attained independently. Moreover, these results corroborate the predictions made by Deci and Ryan through their Self-Determination Theory, wherein the use of tools that allow learners to receive instantaneous feedback and competence leads to increased academic success. Within the local setting, such results echo those from Pascual's (2020) research on the incorporation of ICT in Philippine social studies, showing that digital-based tools yield more successful outcomes compared to traditional methods. A research study by Yap and Gonzaga (2024) was conducted about the application of internet-based programs for education purposes in secondary schools. They found out that these programs promote active learning, making it possible to achieve a "significant difference" because learners are more likely to remember knowledge they acquire by actively engaging in the learning process.

The first conclusion that can be drawn from the data is that Wayground is an extremely successful instrument in solving the problem of retention rates in Araling Panlipunan. The proof lies in the fact that the experimental group had a much higher difference between the pretest and posttest scores compared to that of the control group – 7.79 versus 3.21, respectively. Thus, we have another confirmation that the investment into using technology is worth it, and it is time for teachers and educational policymakers to make use of the available evidence and take the step towards introducing more advanced methods in classroom instruction. In this regard, it is evident that the Proposed Action Plan is a logical solution to ensure success in improving the performance of learners.

Significant Mean Gain Difference on the Pre-Test and Post-Test Scores Between the Two Groups

Table 6 Test of Significant Mean Gain Difference on the Pre-test and Post-test scores between the two groups

Source of Difference	Mean Gain	Standard Deviation	Mean Gain Difference	t- value	p-value	Decision	Result
Control	3.21	4.51	4.58	3.216*	0.002	Reject Ho	Significant
Experimental	7.79	7.38					
*significant at p < 0.05 (two-tailed);df=70							

Table 6. The statistical data presented in this table clearly confirms the significance of the difference between the two groups' achievements as a result of the experiment. Although both groups improved their skills, the Mean Gain of the experimental group (7.79) is almost twice greater than that of the control group (3.21). It means that the Mean Gain Difference (4.58) reflects the distinct superiority of the experimental group in acquiring new knowledge using the Wayground tool. The calculated t-value and p-value are 3.216 and 0.002, respectively, and they are much less than the critical alpha value of 0.05. Therefore, the null hypothesis is rejected because the mean gain difference is not a random event, and its occurrence can be explained by the use of the Wayground tool. As it follows from the data presented in Table 6, the standard deviation of the experimental group (7.38) is also greater than that of the control group (4.51).

The high level of gain seen in this experiment is in line with the Cognitive Theory of Multimedia Learning (Mayer, 2009) that posits learning becomes more effective if the learner is able to integrate visually and verbally represented information, an approach embedded in Wayground. Pingol (2026) and Nguyen (2023) conducted recent studies regarding social studies in the Philippines. According to their findings, the utilization of technology-based learning aids and innovative teaching approaches contribute to critical analysis and integration of social concepts wherein it was found out that most learning interventions through use of interactive feedback result in a much higher gain than that through direct instruction. In the context of the Philippine educational system, this evidence is consistent with Arinto's (2016) findings highlighting the fact that use of digital tools for K–12 makes it possible to introduce the required "active learning" elements missing in the traditional textbook approach.

In essence, the significant impact that comes from this mean gain difference is the inadequacy of conventional approaches in maximizing the full potential of students enrolled in Araling Panlipunan. The gain difference of 4.58 points is considered as the "performance gap" that can be resolved by incorporating novel ways of teaching students. This empirical evidence provides ample support for the decision of the school head to focus on the implementation of the DepEd Computerization Program (DO 16, s. 2023) because it shows that computers are more than just gadgets. They are vital tools that help sustain academic performance within schools. More

importantly, the successful execution seen here will serve as the foundation for adopting the Proposed Action Plan.

Level Of Acceptability Of The Wayground Learning Tool

In this part of the study, the degree of acceptability of Wayground among the participants of the experiment will be assessed based on three essential criteria: Perceived Usefulness and Retention Impact, Perceived Ease of Use, Technical Acceptability, Engagement, Motivation, and Behavioral Intention. This analysis will help determine whether the participants were ready to adopt the innovation in question and the practicality of Wayground as an educational tool in the Araling Panlipunan class. The data presented herein provide essential context for understanding how the tool's technical and affective features contribute to the academic performance gains observed in the experimental group.

Table 7 Level of acceptability of the Wayground learning tool in terms of perceived usefulness and retention impact

S/N	Indicators	WM	SD	Verbal Description
1	Using WAYGROUND helps me understand the lessons in Araling Panlipunan clearly.	4.24	0.82	Very High
2	I believe WAYGROUND significantly helps me remember facts and concepts for a longer time.	3.71	0.63	High
3	WAYGROUND improves my academic performance in Araling Panlipunan.	3.65	0.69	High
4	The activities in WAYGROUND are effective for reviewing lessons before a quiz or exam.	4.18	0.67	High
5	I find WAYGROUND to be a valuable learning tool for studying Philippine history and culture.	4.24	0.70	Very High
	Aggregate Mean	**4.00**		**High**
	Aggregate Standard Deviation		**0.70**	

Legend: 4.21-5.00-Very High; 3.41-4.20- High; 2.61-3.40-Moderate; 1.81-2.60-Low; 1.00-1.80- Very Low

Table 7 also demonstrates high acceptability and satisfaction levels of the learners towards the Wayground tool for learning purposes, producing an Aggregate Mean value of 4.00, where "High" is the corresponding description of the numerical scale. In addition, it should be noted that the tool was especially appreciated by the learners due to its helpfulness in understanding complicated lessons as well as being used as a source on the Philippines' history and culture, both indicators having been rated the highest as per the weighted mean scale with a value of 4.24, that is, "Very High". Moreover, exam review using the tool has also obtained the highest rate with a weighted mean of 4.18. On the other hand, the value for long-term memory retention is somewhat low at 3.71, though still being in the "High" category.

The students' high perception of usefulness in the survey is consistent with the Technology Acceptance Model (TAM) proposed by Davis (1989). The TAM assumes that users' perceived usefulness and usability serve as the main determinants of their adoption of a particular technology. The high rating given to the clarity of lessons (4.24) among the students is congruent with Mayer's (2009) Coherence Principle, implying that the use of multimedia tools helps to minimize the amount of unnecessary cognitive load imposed upon the learner, thus enabling difficult ideas in Araling Panlipunan to be understood easily. In relation to local studies, the results of the study correspond with those of Balagtas et al. (2019), who found out that Filipino students have a predilection for interactive digital content in localized language, particularly in subjects that require extensive reading skills.

These findings demonstrate that the Wayground tool is not only efficient in improving test scores but is also highly interactive and accessible to the target audience. Acceptability is a good indicator of sustainability because if students perceive the tool as valuable for studying "Philippine history and culture" (4.24), they will be motivated to pursue self-directed learning beyond classroom time. This way, teachers can cut back on redundant review classes because students will feel competent enough to utilize the tool for their own exam preparations (4.18). Positive responses give the green light to the Proposed Action Plan by confirming the social and

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume X Issue V May 2026

educational relevance of the intervention. In conclusion, high acceptability guarantees optimal utilization of the tool, thus maximizing the cost-efficiency of the computerization policy promoted by the Department of Education.

Table 8 Level of acceptability of the Wayground learning tool in terms of perceived ease of use and technical acceptability

S/N	Indicators	WM	SD	Verbal Description
1	The navigation and layout of WAYGROUND are easy for me to use.	3.88	0.73	High
2	I find the instructions and prompts in WAYGROUND to be clear and simple.	4.18	0.58	High
3	I did not need much help from the teacher or classmates to use WAYGROUND.	3.06	1.01	Moderate
4	I do not worry about making mistakes when using the WAYGROUND platform.	3.32	0.98	Moderate
5	WAYGROUND is reliable and works smoothly without technical problems.	3.74	0.90	High
	Aggregate Mean	**3.64**		**High**
	Aggregate Standard Deviation		**0.84**	

Table 8 An evaluation of the technical performance and usability of the Wayground software has been provided in Table 8, with an aggregate mean score of 3.64 falling within the "High" verbal category. Students indicated that the instructions and prompts offered were very clear and easy, as indicated by the maximum mean score of 4.18. Navigability and interface layout were also well liked with an average of 3.88, while the reliability and technical performance of the software came up with a mean score of 3.74. Notably, there seems to be evidence of a learning curve since the indicators of independent use and being comfortable to make errors had moderate scores of 3.06 and 3.32, respectively.

The moderate results of independence (3.06) point out the need for the Scaffolding, a key idea in Vygotsky's social constructivism, in which there is a need for guidance in the early stages in order for the learner to be able to do things independently. The positive result in relation to clear instructions (4.18) corresponds to Mayer's (2009) principle of Signaling, where learners benefit from cues that guide them towards paying attention to important information. In the case of Philippine ICT-based education, findings from the work by Rodrigo (2018) prove that although Filipino youth are considered "digital natives," they need assistance when making the shift from using social media to more advanced educational sites.

Based on these results, it could be observed that even though Wayground is a well-designed system with clear instructional directions, an orientation stage or "onboarding" process must be done to make sure that students go from "Moderate" to "High" independence in using the system. The high scores in instructional clarity prove that the tool could be successfully implemented in the classroom environment when guided by the teachers. In addition, the high score in reliability (3.74) indicates that the tool is compatible with the available computers in the schools which are provided under the DepEd Computerization Program. On the other hand, the Proposed Action Plan should consider these results as a basis for the creation of training modules for the teachers and students to avoid unnecessary worries and errors in the usage of the system.

Table 9 Level of acceptability of the Wayground learning tool in terms of engagement, motivation, and behavioral intention

S/N	Indicators	WM	SD	Verbal Description
1	WAYGROUND makes me more interested and motivated to study Araling Panlipunan.	3.94	0.81	High
2	I enjoy learning when I am using the WAYGROUND tool.	4.21	0.81	Very High
3	I prefer learning Araling Panlipunan using WAYGROUND over learning from a textbook alone.	4.00	1.02	High

4	I would recommend WAYGROUND to other students who find Araling Panlipunan difficult.	3.97	0.63	High
5	I intend to use the WAYGROUND tool regularly if it remains available.	4.06	0.78	High
	Aggregate Mean	**4.04**		**High**
	Aggregate Standard Deviation		**0.81**	

Table 9 illustrated in this table is the behavioral effects of the Wayground software tool can be seen through the high level of aggregate mean (4.04), denoted as "High". The highest sentiment among students was the feeling of happiness during learning; this received a "Very High" rating and a mean of 4.21. This happiness led to a behavior of preference towards digital rather than traditional tools, as evidenced by the awarding of a mean of 4.00 on the preference of Wayground to a textbook only. Also, there were high behavioral intentions of using the platform (4.06) as well as recommending the platform to others (3.97). An Aggregate Standard Deviation of 0.81 was witnessed in all sentiments apart from the preference of textbooks (1.02).

The “Very High” rating of enjoyment (4.21) is an embodiment of the Self-Determination Theory of Deci and Ryan, where intrinsic motivation is driven by the sense of competence and autonomy through the tool. This affective state plays a vital role in retention because, according to Mayer (2009), “affect” greatly affects how learners process information. At the local level, the results coincide with the Enhanced Basic Education Act (RA 10533), which aims to make the curriculum “learner-centered, inclusive, and developmentally appropriate.” The studies conducted by Abadiano and Turner (2015) on the classroom setting in the Philippines also support this claim, asserting that when learners are stimulated by the interactive media, there is greater likelihood that they would engage in studying social sciences in the long run.

It follows that Wayground is not just an instructional device but rather a strong motivational element that will help transform the students' attitude towards Araling Panlipunan, a subject that is commonly considered to be quite boring. The strong preference towards the tool compared to books (4.00) indicates that implementing a blended learning or purely digital learning method may greatly minimize the risk of fatigue or boredom among students. In terms of implications for the administration of educational institutions, the high intention to behave score (4.06) should serve as grounds for making sure that the tool becomes permanently implemented within the LAC framework, considering how prepared and motivated students seem to be about its usage.

Summary On the Level of Acceptability of The Wayground Learning Tool

Table 10 Summary on the level of acceptability of the Wayground learning tool

Components	**WM**	**SD**	**Verbal Description**
Perceived Usefulness and Retention Impact	4.00	0.70	High
Perceived Ease of Use and Technical Acceptability	3.64	0.84	High
Engagement, Motivation, and Behavioral Intention	4.04	0.81	High
Grand Mean	**3.89**		**High**
Grand Standard Deviation		**0.78**	

Table 10 gives a detailed summary of acceptability of the tool resulting in a grand mean of 3.89, indicating high acceptability of the tool. Out of the three main elements, "engagement, motivation and behavioral intention" were rated highest with weighted mean score of 4.04, followed by "perceived usefulness and retention impact" with a score of 4.00, both being high. Even if the third element "perceived ease of use and technical acceptability" scored less (3.64), it was not low and indicates good acceptance of the tool by students. The Grand Standard Deviation of 0.78 shows that the response of students towards the tool was uniform.

This correlation of results reinforces the holistic perspective employed by the theoretical foundation of the research, especially between Mayer’s Multimedia Learning Theory and Self-Determination Theory. The high score for motivation (4.04) and usefulness (4.00) can be attributed to the claims of Fredricks, Blumenfeld, and Paris (2004) regarding the multidimensionality of school engagement that contributes to future academic achievements. At a local level, the results corroborate the DepEd’s MATATAG Agenda that stresses the importance of creating engaging learning environment through digital transformation. Moreover, the work by

De Vera et al. (2021) conducted on digital game-based learning in the Philippines supports the claims made in the present study. Particularly, the work shows that when ease and educational benefits of technology are balanced, learners demonstrate a significantly increased level of commitment to mastering such social studies courses as Araling Panlipunan.

The main implication behind these summarized data is that the entire Wayground program is a comprehensive success as it manages to cover both the cognitive, technical, and affective requirements of the users. Since the "Grand Mean" is relatively high, it shows that the tool has the potential to be used on a wider scale because it is no longer considered novel but something of necessity in order to achieve meaningful learning. However, a slightly less impressive score regarding technical simplicity (3.64) indicates that even though Wayground performs very well, the Proposed Action Plan should focus on constant technical improvement to reach the "Very High" category. In the end, these findings suggest an ideal pathway for teachers who wish to move beyond books and raise a highly motivated and technically skilled generation of Filipino students.

Indeed, the figures in the table demonstrate an unchangingly positive attitude towards the Wayground learning tool. Students regard the platform as a very efficient tool for enhancing their knowledge and understanding of key concepts in an academic course. In addition, the findings show that the platform is very user-friendly and convenient to work with due to a friendly interface.

However, the results indicate not only the high efficiency of the platform but also a profound affective and behavioral attitude toward it. Gamification has proved to be a powerful method to motivate students and develop their interest in staying engaged in the learning process. Overall, there is a unanimous perception of the tool being useful and attractive to the users.

Consequently, one may conclude that the Wayground learning tool represents an effective blend of technological and pedagogical components. This combination makes the platform easy-to-use and efficient. Hence, it is a very acceptable solution for educational purposes.

SUMMARY

The purpose of this research was to assess the effectiveness and acceptability of the Wayground learning tool in enhancing retention and performance in Araling Panlipunan. A quasi-experimental approach was employed to evaluate the effectiveness and acceptability of the learning tool. The research compared the performance and perception of the experimental group composed of 34 students and the control group composed of 38 students. The data collection methods employed were pretest and posttest to measure cognitive growth and an acceptability survey to measure the experimental group's perception.engagement levels.

FINDINGS

The findings of the study showed that:

Baseline pretest results indicated similar levels of satisfactory performance between both groups. Although there were notable improvements from pretest to posttest for both groups, the experimental group recorded a higher rate of improvement into the top performance categories. Analysis further revealed that while traditional approaches can yield consistent improvements, the improvements in the experimental group were much greater. The substantial mean difference in gains clearly establishes the advantage of the digital platform in fully utilizing the learner's potential and mastering concepts faster through digital scaffolding.

Moreover, students rated the tool highly in terms of acceptance for its helpfulness and reliability. Students found the tool very useful for breaking down difficult lessons and its easy to use interface. However, students needed time to understand how to use the tool effectively. But most importantly, the intervention served as a powerful motivator; students favored Wayground over traditional textbooks, highlighting their greater enjoyment and engagement with the former over the latter. Overall, it appears that the tool met the cognitive and affective requirements of learners by serving as an essential solution to help overcome achievement gaps in social

Given the results demonstrating that the use of Wayground increases students' ability to remember information and is very acceptable among students, it becomes clear why an Action Plan should be suggested for its full-scale implementation. The plan involves the integration of Wayground into the existing course, the provision of training for teachers via LAC, and improvements to the tool interface.

CONCLUSIONS

The study proves the statistical advantage of the Wayground system over conventional teaching in terms of improving knowledge retention about concepts in Araling Panlipunan.

The conduct of the pretest and posttest showed that all the learners shared the same initial knowledge level, which was mostly at a “Satisfactory” level and depended much on memorization. The clustering of scores proved the internal validity of the quasi-experimental design. While both the control and experimental group made academic improvements, the statistics revealed that the mean increase was significantly greater for the experimental group than for the control group. This result is evidence that the Wayground system statistically outperforms traditional educational approaches in terms of knowledge retention. From the study, it was found out that Wayground serves as a powerful catalyst in learning, enabling learners to attain mastery that they probably could not acquire using conventional methods. This implies that Wayground is essential in bridging the knowledge gap in Araling Panlipunan.

Implications from the research findings on professional practice are significant, in that even though conventional approaches aid continuous development, through incorporating digital scaffolding, students are able to attain competence that would otherwise be beyond their capability. This is confirmation to teachers that technology works as an effective motivation tool which turns passive learners into active participants thus increasing their engagement. An important lesson in pedagogy in this case is that technology alone is not enough, but that it is necessary for teachers to actively supervise and work collaboratively.

With respect to the formulation of policy and programs, the relatively high grand mean on acceptability indicates that the Wayground is indeed a feasible and sustainable inclusion in the social studies curriculum. This is because the findings of the study will enable schools to implement the DepEd Computerization Program effectively, transcending the view that computer technology is nothing but an invention for fun and considering it as an important instructional medium. The study ends with the proposal of an action plan that highlights that future policies must include the use of gamification.

RECOMMENDATIONS

Considering the remarkable progress in terms of student retention rates and the very high acceptability of the learning tool among the students tested, it is recommended that the school formally adopt the action plan formulated by the researcher. The action plan will involve a step-by-step process of introducing gamified learning to the school and integrating the tool into the classroom through linking each module of the Wayground tool to the Araling Panlipunan subjects and conducting training seminars for teachers on the importance of digital education. The process would allow the school to take advantage of the effectiveness of digital gamification in learning.

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